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ABSTRACT

This booklet answers frequently asked questions about the Exit Examination that students in South Carolina must pass before they receive a high school diploma. As provided for by the Education Improvement Act of 1984, the State Board of Education adopted the South Carolina Basic Skills Assessment Program (BSAP) objectives in 1985 as the basis for the Exit Examination. The Exit Examination consists of three subtests: (1) writing; (2) reading; and (3) mathematics. The examination is administered in the spring of each year to students in grades 10, 11, and 12 in public school and to Adult Education students. It is also administered each fall to all 12th-grade public and Adult Education students. A score of 700 or above is required to pass the reading and mathematics subtests; a score of 3 is required to pass the writing subtest. A student must pass all three subtests in order to pass the Exit Examination. This guide contains information on preparing for and taking the Exit Examination as well as a description of the ways in which skills are tested in the examination. Sample questions with answers are given for each of the subtests. (SLD)

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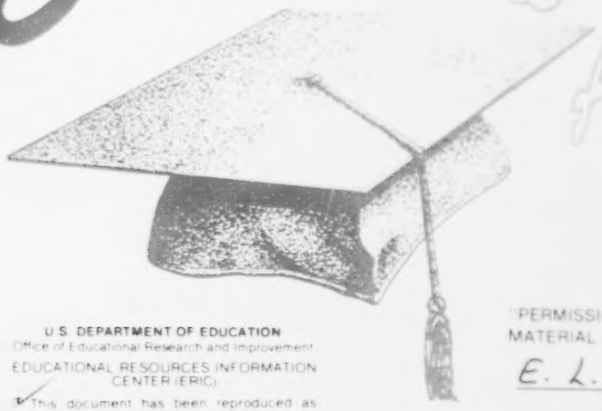
South Carolina Exit Examination:

Questions and Answers



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SOUTH CAROLINA DEPARTMENT OF EDUCATION

1989

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A Basic Skills Assessment Program Publication

Prepared by:

Student Assessment Unit

Educational Assessment Section

Office of Research

South Carolina Department of Education

1989

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Dear Student,

The State of South Carolina is committed to providing quality education for all students. In accordance with this philosophy, the Basic Skills Assessment Program was developed to monitor student progress in Writing, Reading, and Mathematics. The Education Improvement Act of 1984 added a key assessment provision. Beginning with the graduating class of 1990, all students must pass an Exit Examination which includes subtests in Writing, Reading and Mathematics before they can receive a South Carolina High School Diploma.

This booklet is designed to answer some frequently asked questions about the Exit Examination. In addition, it provides you with a description of the objectives and subskills in the areas of Writing, Reading, and Mathematics. Also included are sample test items to help you better understand how the skills are tested.

If, after reading this booklet, you have further questions about the Exit Examination, please contact someone in your school. I wish you every success in your future pursuits.

Respectfully,

Charlie G. Williams

Charlie G. Williams
State Superintendent of Education

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INTRODUCTION

The Education Improvement Act (EIA) of 1984 requires that, beginning with the graduating class of 1990, students must pass an exit examination to receive a South Carolina High School Diploma. In February of 1985, the State Board of Education adopted the South Carolina Basic Skills Assessment Program (BSAP) objectives as the basis for the Exit Examination. The Exit Examination consists of three subtests: Writing, Reading, and Mathematics. **Beginning in 1990, any student who wants to receive a South Carolina High School Diploma must pass all three subtests of the Exit Examination, in addition to meeting all other requirements for the diploma.**

WHEN TO TAKE THE EXIT EXAMINATION

When do students take the examination?

The examination is administered in the Spring of each year to 10th, 11th, and 12th grade public school and Adult Education students. The Exit Examination is also administered each fall to all 12th grade public and Adult Education students. Someone at your school will notify you of the test dates for each subtest of the Exit Examination.

When do Adult Education students take the examination?

The Exit Examination is administered to Adult Education students during the same time period that it is administered to students in the public schools. Adult Education centers will notify their students of specific test dates.

What happens if you miss a regularly scheduled test administration?

Students may take any missed subtest during make-up week (the week after regular testing). Students who are absent during make-up testing will not be able to take the missed subtest(s) until the next regularly scheduled test administration. For example, suppose you are a 10th grader who was absent during both testing and make-up weeks. You would not be able to take the examination until the Spring administration when you are in the 11th grade.

TEST SECURITY

The Exit Examination is a **secure test**. According to South Carolina law, **anyone** found guilty of violating test security regulations will be prosecuted.

PASSING THE EXIT EXAMINATION

What scores do you need to pass?

To pass the examination you must receive a score of 700 or above on **each** of the Reading and Mathematics subtests. You need to answer approximately 70 percent of the items correctly on each of the Reading and Mathematics subtests to make sure that you will meet the passing score of 700. You must receive a score of 3 or above on the Writing subtest. **You must pass all three subtests to pass the examination.**

What happens if you don't pass all three subtests?

Any student who fails any subtest of the Exit Examination must enroll in the appropriate remedial program(s). The student must also retake any subtest(s) not passed during the next regularly scheduled test administration.

How many opportunities do you have to pass?

Most students have four opportunities or attempts to pass the Exit Examination in high school: once in the 10th grade, once in the 11th grade, and twice in the 12th grade. However, there are some occasions where students may have fewer than four opportunities for testing. Some examples follow.

1. A student who repeats ninth grade one year and earns enough units to go from ninth grade to eleventh grade would not have an opportunity to be tested as a tenth grader.
2. A student who repeats ninth grade at least two times may possibly go from ninth to twelfth grade. This student would not be tested as a tenth or an eleventh grader.
3. A student who moves into the state after the tenth grade year will not have an opportunity to be tested as a tenth grader. A student who moves into the state as a twelfth grader will not be tested as a tenth or an eleventh grader.

On the other hand, students may have more than four opportunities for testing if a grade is repeated. Some examples follow.

1. Each year a student repeats the tenth grade, he or she is eligible to take any subtest failed the previous year.
2. Each year a student repeats the eleventh grade, he or she is eligible to take any subtest failed the previous year.
3. Each year a student repeats the twelfth grade, he or she is eligible for testing twice during the year, fall and spring.

If you take only one of the subtests, is that considered an attempt?

Yes, taking **any** subtest of the Exit Examination is considered an attempt. For example, suppose you took only the Writing and Reading subtests last year and passed both. This year you would take the Mathematics subtest. This would be considered your second attempt on the Exit Examination even though you had not taken the Mathematics subtest before.

What happens if you meet all graduation requirements except for passing the Exit Examination?

You have three choices.

1. Receive a South Carolina High School Certificate instead of a diploma. This state certificate indicates the number of credits earned and the grades completed.
2. Receive a South Carolina High School Certificate instead of a diploma and enroll in an Adult Education program. You may continue to take the Exit Examination through that program. If you pass the Exit Examination, you may then receive a diploma.
3. Continue to enroll in high school and receive remedial help until you pass all three Exit Examination subtests. (You may do this until you are 21 years old. Contact your school for information concerning the minimum number of courses required for enrollment.)

SPECIAL TESTING SITUATIONS

Are special arrangements made for handicapped students?

Yes, there are special arrangements and test forms which may be used by students who have an Individualized Education Plan. The Director of Programs for the Handicapped in your district is responsible for ordering any special materials made available by the State. If you have a handicapping condition that you believe may affect your performance on the examination, you should consult your guidance counselor concerning the availability of accommodations that might assist you.

What if handicapped students do not take or pass the Exit Examination, but meet all other requirements for graduation?

They will receive a South Carolina High School Certificate. This is the same type of state certificate which will be given to non-handicapped students who leave school without passing the Exit Examination but meet all other graduation requirements.

Are handicapped students allowed more time to take the examination?

Since the subtests are untimed, all students, including those with handicaps, should be allowed as much time as necessary to finish the examination.

Are homebound students required to take the Exit Examination?

All students, including homebound students, must pass all three subtests of the Exit Examination to receive a South Carolina High School Diploma. If you are a homebound student, you should contact your guidance counselor about any special arrangements for taking the examination. NOTE: Homebound students are those students who receive instruction at home or in the hospital and cannot attend school because of illness, accident, or pregnancy, even with the aid of transportation.

Are there any foreign language versions of the Exit Examination?

All of the Basic Skills Assessment Program Tests, including the Exit Examination, are administered in Standard American English. No modifications or translations are allowed for limited or non-English speaking students.

HOW TO PREPARE FOR AND TAKE THE EXIT EXAMINATION

How do you study for the examination?

The Exit Examination tests knowledge and skills from the basic skill areas of Writing, Reading, and Mathematics. The objectives for these skill areas have been emphasized in South Carolina schools since the distribution of State Objectives to teachers, schools, and districts in the fall of 1979. On pages 5-28, you will find a description of the objectives for Writing, Reading, and Mathematics; some sample test questions; and an answer key. More detailed information concerning the BSAP Writing, Reading, and Mathematics objectives and subskills is provided in the *Teaching and Testing Our Basic Skills (T & T)* series which has been distributed to district offices and to schools throughout South Carolina.

Should you guess?

Your scores will be determined by the number of questions you answer correctly. **If you are uncertain about a question, you should try to answer the question rather than not respond at all.** Try to eliminate choices that you know are not correct. Then select the best possible answer. Random guessing is not recommended.

How much time do you have to take the examination?

The three subtests are **not** timed. You are allowed as much time as necessary to finish the examination.

What additional materials can you use during the examination?

Dictionaries are allowed for the Writing subtest. Rulers, protractors, and formula cards are provided for the Mathematics subtest. There are other materials that may be used only by handicapped students. All of these materials are specified in the test administration manuals that are distributed to districts and schools.

HOW SKILLS ARE TESTED ON THE EXIT EXAMINATION

WRITING

The Writing subtest measures achievement of the state writing objectives in the context of students' compositions. Following are the five state-adopted writing objectives and their descriptions.

HANDWRITING: The student can write legibly.

MECHANICS: The student can spell, capitalize, and punctuate correctly.

WORD USAGE: The student can use words appropriately.

SENTENCE FORMATION: The student can compose sentences.

COMPOSITION: The student can communicate ideas in writing.

Students must write the compositions in response to a topic specified in the "writing prompt." The prompt also specifies the audience to be addressed and indicates the type of writing for the composition. There are four types of writing: narration, description, exposition, and persuasion. A general description of the prompt for each type of writing follows.

NARRATION: The prompt may ask you to "tell about" real or imagined events.

DESCRIPTION: The prompt may ask you to "describe" details about people, places, objects, emotions, or events.

EXPOSITION: The prompt may ask you to "explain" factual information, ideas and opinions, or the steps of a process.

PERSUASION: The prompt may ask you to present reasons which will "convince" someone to act or think in a certain way.

The administration procedures for the Writing subtest require that the student develop a draft (or drafts) of a composition, edit the draft(s), and then write a final draft. Schools are required to provide dictionaries for students to use during the Writing subtest. **Students must write their final drafts in their answer folders**.

The directions that you will see on the test and a sample prompt are presented below.

GENERAL DIRECTIONS

You are to write a composition on an assigned topic. Your composition should be focused on this topic and should have a beginning, a middle, and an end. The ideas expressed should be related to the topic. The composition should be developed; and it should flow smoothly. Be sure to write enough to communicate whatever you want to say and to insure that an accurate judgment of your writing skills can be made.

For the first draft of your composition, use the scratch paper provided. When you finish your first draft, read it to see if it is well organized and clear and has a beginning, a middle, and an end. Make any changes that you think will improve your composition.

Make sure that you have used words correctly and that all your sentences are complete. Check your spelling, punctuation, and capitalization. Then write your final draft in the space provided in your answer folder, using your best handwriting. You may make neat changes on your final draft. When you finish, put your first draft inside your answer folder and wait for your materials to be collected.

CAUTION: For this test, poems and songs are not considered compositions and will receive "0" scores.

WRITING: SAMPLE PROMPT

Write a composition for your classmates describing a moment in your life when you were very happy.

READING

The Reading subtest consists of 60 multiple-choice items (10 items for each objective). A description of the objectives, examples of the types of skills tested, and sample test questions are provided. You may check your answers to the sample items by referring to the answer key on the last page of this booklet.

DECODING AND WORD MEANING: The student can use word recognition skills and can determine the meanings of words.

Examples of the types of skills tested for this objective may require the student to

- identify the definition of a word used in a sentence.
- identify the definition of a word by using the situation in a reading selection as a context clue.
- identify the definition of a word by using a synonym or antonym as a context clue.
- identify the definition of a word by applying structural rules for prefixes, roots, and suffixes.

DETAILS: The student can accurately understand the details in a reading selection.

An example of the types of skills tested for this objective may require the student to

- identify specific details from a selection (e.g., how, how much, when, where, or which).

MAIN IDEA: The student can determine the main idea of a reading selection.

Examples of the types of skills tested for this objective may require the student to

- select the main idea which is paraphrased from a reading selection.
- select the main idea which must be inferred from a reading selection.

REFERENCE USAGE: The student can locate and utilize desired information in reference sources.

Examples of the types of skills tested for this objective may require the student to

- select the appropriate reference source (e.g., map or card catalog) for a specified purpose.
- use a reference source to locate specific information.

INFERENCE: The student can make valid inferences about a reading selection.

Examples of the types of skills tested for this objective may require the student to

- make comparisons based on information presented in a reading selection.
- identify the outcome of an event described in a reading selection.
- identify the cause related to an event described in a reading selection.
- draw conclusions based on information presented in a reading selection.
- predict an outcome based on information presented in a reading selection.

ANALYSIS OF LITERATURE: The student can critically analyze a reading selection.

Examples of the types of skills tested for this objective may require the student to

- identify the statement in which the information presented is a fact.
- identify the statement which best presents the argument.
- identify the statement in which the information presented is an opinion.
- identify a structural element (e.g., mood or character).
- identify a rhetorical device (e.g., simile or hyperbole).
- analyze a selection to determine such things as setting, plot, etc.
- select the statement which represents a valid interpretation of a passage.

READING: SAMPLE TEST QUESTIONS

Before each question, the objective being tested is identified.

Decoding and Word Meaning

> **The crowd dwindled.**

1. In the sentence above, **dwindled** means
   - (A) shouted cheers
   - (B) grew quiet
   - (C) became smaller
   - (D) threw streamers

Decoding and Word Meaning

> **They circumnavigated the bay.**

2. In this sentence, **circumnavigated** means
   - (A) guided a ship in
   - (B) traveled too fast in
   - (C) piloted a ship beyond
   - (D) sailed completely around

Details

FIRST PERFORMANCE

"I wish I were a seahorse buried under sand," Sue Ellen thought, as she glared into the make-up mirror and smeared her lipstick on as best she could.

The dressing room had turned into a zoo -- with the feathers from this costume and the fur from that -- Sue Ellen could swear her friends were circus animals instead of the cast of "The Good Old West."

The clock ticked on like a clown doing tricks. Sue Ellen fixed her cowgirl hat for the twenty-second time, then tried to remember the single line she had to say in the whole play.

Just then the door swung open and a voice yelled out: "Half an hour to go. And there's not a seat left in the house."

Sue Ellen's mind went blank. Perspiration broke out like drops of rain on her forehead as butterflies invaded her stomach.

She came out of the dressing room door and raced down the long hallway to the waiting room by the stage. There she found Tammy, the star of "The Good Old West," taking deep breaths. "Stage fright," Tammy said. "It happens every time like the first time."

Sue Ellen's forehead cooled. Seeing Tammy nervous too made her suddenly feel calm, just almost calm. "Thanks, Tammy," Sue Ellen said, and as she took a deep breath like the star, the line came back: "Let's ride out west, as far west as we can go."

3. How did the clock in the dressing room tick?

(A) like a clown doing tricks

(B) like the circus animals

(C) like a seahorse buried under sand

(D) like drops of rain

Details

TESTING BLOOD SUGAR

If you ever want to monitor your blood-sugar level, you will find that there is a relatively new, easy, and inexpensive process. This method is especially convenient for persons who work or travel. With a little practice, the test can usually be mastered in a short time. For many persons, the hardest part of the process is using a needle to lance the finger and draw a little blood.

After the blood is drawn, it is transferred from the finger to a strip that contains a chemically treated pad. The blood is placed directly on the pad. After one minute, the pad develops shades of color which vary according to the amount of sugar present in the blood.

The next step is to wipe the pad clear using a cotton ball. One minute after wiping the pad, compare its color to a color chart on the side of the strip container. If a match does not result, the blood sugar level may be estimated by looking at the color which corresponds most closely.

4. Which of the following should you do immediately after you draw a drop of blood from the finger?

   (A) Wipe the pad clear using a clean cotton ball.

   (B) Transfer the blood from the finger to a chemically-treated pad.

   (C) Wait one minute before you transfer the blood to the pad.

   (D) Compare the color on the strip with the color on the container.

Main Idea

THE WATCH

The great scientist Albert Einstein often used stories to illustrate his thinking. One of his most famous tales concerns mankind's inability to understand the universe.

Imagine you suddenly find a watch. You have never seen anything like it before. As you turn it over in your hands and hold it up to your ear, you wonder how it works. To find the answer, you try to pry open the watch but you can't. You simply do not have the tools to lift its cover. Therefore, you study the watch from the outside instead. By examining its surface and trying to understand what makes it behave as it does, you try to build a watch just like it. After much trial and error, you succeed in creating a copy which, like the original, tells time with great precision.

Years later, however, you find the power to open the original watch. Peering inside, you are astonished to see that the inner workings are entirely different from those of the watch you constructed. Yet both mechanisms produce the same results!

To Einstein, the universe was like a watch that couldn't be pried open. He believed, however, that we can create a satisfying theory to explain everything that happens even though the true explanation for things may be quite different.

5. The best statement of the main idea is:

   (A) Einstein thought that we could find a way to make sense of the universe although we might never actually know its true design.

   (B) According to Einstein, it is impossible to comprehend anything that happens because we are unable to uncover the mysteries of the universe.

   (C) By studying the surface movements of a watch, Einstein was able to develop a theory that explains the workings of the universe.

   (D) The great scientist Albert Einstein once used a story about a watch that could not be pried open to illustrate his theory of energy.

Main Idea

568 Cedar Lane
Pickens, South Carolina 29671
March 6, 1981

Mrs. Josephine Fenster
Director, Research Department
Accu-Pic Camera Company
Greenville, South Carolina 29602

Dear Mrs. Fenster,

I greatly appreciate your offer of employment. As you have shown me, your company has an excellent range of employee benefits, as well as a very generous salary schedule. I am certain that I would enjoy working for your company.

Unfortunately, if I were to take a position with Accu-Pic, I would have to drive about twenty miles each way to and from work. Since the price of gasoline is high and will probably continue to rise, I fear that I cannot afford to drive that far. Therefore, I must see if I can find employment that would be located closer to my home.

I am grateful for the time you spent reviewing my application and showing me around your Greenville facility. I regret that I cannot join your company at this time.

Sincerely,
Frederick Mardell
Frederick Mardell

6. The best statement of the main idea is:

(A) Although Frederick Mardell would make more money at Accu-Pic than anywhere else, he cannot take the job they are offering him.

(B) The high price of gasoline is making it hard for people to work where they want.

(C) Since Frederick Mardell did not care for the work environment at Accu-Pic, he will not accept a job there.

(D) Frederic Mardell regrets that he must turn down Accu-Pic's appealing job offer because of the travel expenses involved.

Reference Usage

7. Where can you find the page(s) on which the Titanic ocean liner is mentioned in a book about famous disasters at sea?

   (A) a thesaurus

   (B) the index

   (C) the bibliography

   (D) a card catalog

Reference Usage

NEWSPAPER INDEX

Amusements 8-E
Books 6-E
Business 15-E
Classified 10-C
Crossword 4-C
Deaths 15-A
Editorials 16-A
Focus ..... Section E
Horoscope 6-A
Local Page 1-C
Sports ..... Section B
Travel 13-E
Trends ..... Section F

8. In which section will you most likely find information about places to take a vacation?

   (A) Section F

   (B) 10-C

   (C) 8-E

   (D) 13-E

Inference

A LOOK AT THE RECORD

Election time is here once more. The citizens of Fairfield must choose a new mayor from among four candidates. How can we make the best choice? Let us look at the records of our candidates.

Mary Jo Kappel, the present mayor, has proposed a new tax to be paid by local merchants in order to provide funds to construct a city park. She has also consistently opposed the development of large scale office complexes in Fairfield.

Paul Burke has owned a restaurant in Fairfield for eighteen years. As president of the Fairfield Business League, he has worked hard to attract business from neighboring towns.

Odetta Lynn is a former judge well-known for her support of consumer groups. In legal suits against retail businesses, she consistently granted higher awards to consumers than did other judges in similar cases.

Jerry Sledge is a retired teacher with no political experience and little apparent interest in anything but the business of education. He has pledged to make Fairfield schools the best in the state, whatever the cost to other community members.

9. Which candidate, if elected mayor, would probably do the most to help local business?

(A) Paul Burke

(B) Mary Jo Kappel

(C) Odetta Lynn

(D) Jerry Sledge

Inference

COLORS BEES CAN SEE

Scientists have conducted experiments to determine if bees can distinguish between two colors. One experiment began with a table in a garden. A scientist placed a glass plate containing a drop of syrup on a table. Then she put a piece of blue cardboard underneath the plate. Soon bees gathered on the plate and began to suck up the syrup. Then they flew to their hive and gave the syrup to other bees who could make honey. The scientist let the bees fly back and forth between their newly-discovered feeding place and their hive for a while. Then she removed the cardboard and the plate of syrup from the table. The scientist was ready to begin the second half of the experiment.

This time the scientist placed a blue card on the left side of the first feeding place and a red card on the right side of the first feeding place. She placed an empty glass plate on each card. The area of the first feeding place was left bare, and the chairs which had previously surrounded the table were taken away. Soon the bees arrived. They flew directly to the blue card. None went to the red card.

10. What most likely caused the bees to fly to the blue card in the second half of the experiment?

(A) In nature, bees associate the color blue with the presence of honey.

(B) The chairs which had surrounded the table before were now taken away.

(C) The bees associated the color blue with the syrup from the first experiment.

(D) The bees could not distinguish between the color blue and the color red.

Analysis of Literature

From an editorial . . .

Last night Channel 10 announced that Jerry Fiddler had won the election for Mayor. Now we hear that the results won't be official until an investigation of certain "mysterious" problems with the voting machines can be completed. As far as I'm concerned, there's no need for an investigation. I could have predicted that something strange was going to happen at the last minute in this election. With a man like Jerry Fiddler running for Mayor, what can you expect?

From the moment Jerry Fiddler announced his candidacy, you could see dishonesty written all over his face. I can't believe that the people of this town could have been deceived by a man like him. Just look at the tricky way he ran his campaign, always trying to invent a scandal about his opponent, Mary Wiser. The only way Jerry Fiddler could have won this election is through fraud. You don't need a voting machine to tell you that!

11. Which one of the following statements best describes the argument developed by the writer of the selection above?

(A) The writer attacks the person instead of the problem.

(B) The writer uses the basic assumptions of an argument to prove that argument.

(C) The writer assumes that one event caused another event that follows.

(D) The writer constructs a valid argument.

Analysis of Literature

Rhett Williams waited in the library of his grandfather's home. Rhett had been told to meet his grandfather at five o'clock that afternoon. He looked forward to the meeting because his grandfather had promised that Rhett could help him feed the goldfish in the pond. While he waited, he lay on the library floor reading the comics.

Others also awaited the approach of Rhett's grandfather. His mother and grandmother hoped for the best, but dreaded the worst. Their voices were strained from years of waiting and wondering. Even Rhett was uneasy about the old gentleman's return. The boy could never be sure about his grandfather's humor.

Rhett's heart jumped as he heard heavy footsteps strike the porch. The front door opened; and the heavy man pressed forward into the hall, then into the library. He spotted Rhett, then the comics.

"Reading trash again, I see. Who was Agamemnon, boy? When are you going to start on the classics?"

Rhett was nervous; he didn't know who Agamemnon was, but he knew his grandfather was angry again.

"Is dinner ready, boy?"

Mother and grandmother avoided the library, moving silently past the long dining table and into the kitchen to start a lonely dinner. Rhett stared at the comics. The promise had been forgotten; the fish would have to wait.

12. Which of the following is the best description of the **mood** of the story above?

(A) boring

(B) tense

(C) happy

(D) relaxed

MATHEMATICS

The Mathematics subtest consists of 50 multiple-choice items (10 items for each objective). A description of the objectives, examples of the types of skills tested, and sample test questions are provided. You may check your answers to tne sample items by referring to the answer key on the last page of this booklet.

CONCEPTS: The student can apply numerical concepts.

Examples of the types of skills tested for this objective may require the student to

- convert one form of a number to another (e.g., convert a decimal to a percent).
- given a number in words, find the numerical form of a number, and vice-versa.
- determine the least/greatest cost per unit (e.g., per ounce or per kilogram).
- round a number to a specified place value.
- read and interpret data presented in tables and graphs.
- compute using data presented in tables and graphs.
- identify the square root of a number.
- compute a solution given a formula by substituting values.
- given a simple situation, apply familiar formulas (e.g., distance = rate x time).

OPERATIONS: The student can compute accurately.

Examples of the types of skills tested for this objective may require the student to

- add whole numbers, fractions, decimals, mixed numbers, and integers.
- subtract whole numbers, fractions, decimals, mixed numbers, and integers.
- multiply whole numbers, fractions, decimals, and mixed numbers.
- divide whole numbers and decimals.
- multiply or divide in order to solve percent problems.

MEASUREMENT: The student can apply measurement concepts.

Examples of the types of skills tested for this objective may require the student to

- select the appropriate unit for measuring an object (e.g., pounds or liters).
- estimate the size of an object (e.g., length, area, or volume).
- use a ruler to determine the measure of line segments or distance around a geometric shape.
- use a protractor to determine the measure of an angle.
- add, subtract, and multiply using units of measure (e.g., weight or time).
- use the scale of a map, blueprint, floor plan, etc., to find distance.

GEOMETRY: The student can apply geometric concepts.

Examples of the types of skills tested for this objective may require the student to

- determine which geometric shape is congruent to another shape.
- determine which geometric shape is similar to another shape.
- determine the length of corresponding parts of similar geometric shapes.
- determine the perimeter, area, and volume of geometric shapes.
- determine the circumference and area of a circle.
- determine the volume of a given geometric solid (e.g., cube or rectangular solid).

PROBLEM SOLVING: The student can solve problems involving the use of mathematics.

Examples of the types of skills tested for this objective may require the student to

- determine the exact solution to a word problem by using the information given.
- determine the estimated solution to a word problem by using the information given.
- identify the missing information needed to solve a problem.

Additional materials are provided for your use during the Mathematics subtest of the Exit Examination. These include rulers, protractors, and formula cards. The following formulas will appear on the formula card.

$P = 2l + 2w$

$P = 4s$

$P = \textit{sum of the lengths of the sides}$

$A = l \times w$

$A = s^2$

$A = b \times h$

$A = \frac{1}{2} \times b \times h$

$A = \pi r^2$

$C = 2\pi r$

$C = \pi d$

$V = l \times w \times h$

$V = s^3$

NOTE: Space is provided in your test booklet for working problems.

MATHEMATICS: SAMPLE TEST QUESTIONS

Before each question, the objective being tested is identified.

Concepts

1. The prices for several brands of laundry detergent are shown below. Find which costs the least per gram.

   (A) 650 g for $1.40

   (B) 1350 g for $3.00

   (C) 1550 g for $3.75

   (D) 850 g for $1.99

Concepts

2. The measurement of lumber is determined by using the following formula

$$\text{Number of board feet} = \frac{L\,W\,T}{12}$$

   where L = Length of the board measured in feet
   W = Width of the board measured in inches
   T = Thickness of the board measured in inches

   Find the number of board feet if
   L = 16 feet, W = 10 inches, and T = 6 inches.

   (A) 32

   (B) 80

   (C) 480

   (D) 960

Operations

3. $5\frac{1}{3} \times 4\frac{1}{2} \times \frac{7}{8} =$

(A) $4\frac{3}{8}$

(B) $10\frac{17}{24}$

(C) $20\frac{7}{48}$

(D) 21

Operations

4. 21 is what percent of 28?

(A) 58.8%

(B) 70.0%

(C) 75.0%

(D) 133.3%

Measurement

5.

1 hr. 53 min
x 4

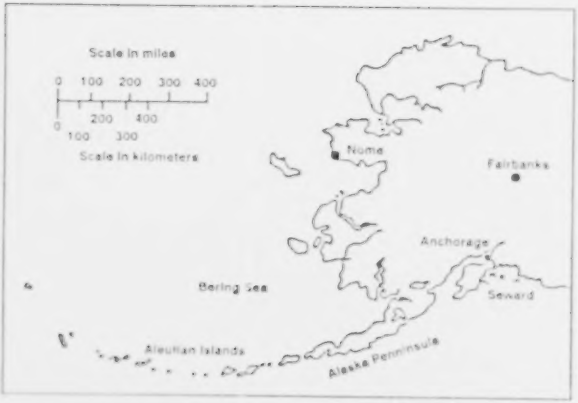
(A) 5 hr. 32 min.

(B) 6 hr. 12 min.

(C) 7 hr. 32 min.

(D) 7 hr. 42 min.

Measurement



6. What is the approximate air distance in kilometers from Nome to Fairbanks?

(A) 2000 km

(B) 800 km

(C) 500 km

(D) 400 km

7. Which triangle is **similar** to the triangle above?

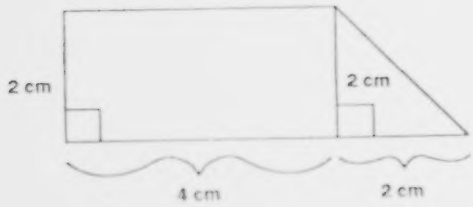
(A)

(B)

(C)

(D)

Geometry



8. What is the area of the figure above?

(A) $8\ cm^2$

(B) $10\ cm^2$

(C) $12\ cm^2$

(D) $14\ cm^2$

Problem Solving

9. Last month, Mrs. Adams kept a record of her car's gasoline mileage. She drove 742 miles and used 28 gallons of gasoline. According to TV advertisements, her car should get 32 mpg (miles per gallon) for gasoline. What was the car's actual gas mileage for the month? (Round to the nearest tenth of a mile.)

(A) 23.2 mpg

(B) 26.5 mpg

(C) 27.9 mpg

(D) 30.1 mpg

Problem Solving

10. **Jane plans to build a concrete block wall 127 feet long and as thick as one block. Each concrete block is 8 inches high and 16 inches long. Each concrete block costs $1.50. How much will the concrete blocks for the wall cost?**

To solve the problem above, what additional information, if any, is needed?

(A) how thick each concrete block is

(B) how much each concrete block weighs

(C) what the volume of the wall will be

(D) what the height of the wall will be

CORRECTION SHEET FOR PAGE 28

SAMPLE TEST QUESTIONS

ANSWER KEY

READING

1. C
2. D
3. A
4. B
5. A
6. D
7. B
8. D
9. A
10. C
11. A
12. B

MATHEMATICS

1. A
2. B
3. D
4. C
5. C
6. B
7. C
8. B
9. B
10. D